

5. PROCUREMENT

CURRENT REQUIREMENTS

As a governmental agency, Washington State Ferries is subject to a multitude of laws, rules, and regulations governing its procurement practices. Title 47 Public Highways and Transportation of the Revised Code of Washington requires Washington State Ferries to contract in the manner of state highway construction. A competitive, formal sealed bid (Invitation for Bid) procedure is used as standard procedure for the construction, improvement, or repair of a ferry, ferry terminal, or other facility and for the procurement of supplies, materials, and equipment for the support of Washington State Ferries.

Specific laws, rules, and regulations include:

- Washington Legislature
- Washington Administrative Code:
 - Title 468 WAC - Department Of Transportation: Chapter 320 - Washington State Ferry Vessel Construction, Maintenance and Repair Contracts
- Revised Code of Washington
 - Title 39 - Public Contracts and Indebtedness: Chapter 04 - Public Work
 - Title 47 - Public Highways and Transportation: Chapter 28 - Construction and Maintenance of Highways; Chapter 56 - State Toll Bridges, Tunnels and Ferries; Chapter 60 - Puget Sound Ferry and Toll Bridge System
- Washington Department of Transportation
- Washington Transportation Commission
- Code of Federal Regulations
- Federal Transit Administration
 - FTA Circular 4220.1D:

When procuring property and services under a grant, a state will follow the same procurement policies and procedures that it uses for procurements using non-Federal funds. States must, as a minimum, comply with the requirements of paragraphs 7m, 8a and b, and 9d of this circular and ensure that every purchase order and contract executed by it or a sub grantee using Federal funds includes all clauses required by Federal statutes and executive orders and their implementing regulations. Sub grantees of states (excluding institutions of higher education, hospitals or other non-profit organizations) shall follow state law and procedures when awarding and administering contracts.

- Federal Transit Administration Best Practices Manual
- Standard Specifications
- Ads and Awards Manual
- CAPS Manual
- Construction Manual
- Engineering Manual

Contractor Pre-Qualification Requirement

All contractors submitting a bid or proposal for the construction, improvement, or repair of a ferry, ferry terminal, or other facility operated by Washington State Ferries must first be pre-qualified to perform the work by the Washington State Department of Transportation and shall file a standard pre-qualification questionnaire and financial statement using forms furnished by the Department per RCW 47.60.680 through RCW 47.60.760 and WAC 468-310-020 through WAC 468-310-070. The pre-qualification questionnaire includes a report of the financial ability of the contractor, its organization, key personnel, equipment and plant facilities, and experience.

Each contractor seeking pre-qualification is classified for one or more classes of work and is given a maximum capacity rating in accordance with its financial ability, the adequacy of its equipment and plant facilities, the extent of its experience, and the adequacy of the experience and capability of its officers and key employees in

performing contracts. Pre-qualification ratings for construction, repair, and maintenance work on ferry vessels and terminals are classified as follows⁵:

- Class 81 - Vessel construction and renovation;
- Class 82 - Dry-docking and hull repairs;
- Class 83 - Vessel metal fabrication repairs;
- Class 84 - Vessel electrical repairs;
- Class 85 - Vessel miscellaneous repairs;
- Class 90 - Terminal structures

Procurement by Sealed Bids/Invitation For Bid (IFB)

Washington State Ferries is required to follow a competitive bidding process pursuant to RCW 47.28.090. Contracts for construction and preservation are to be awarded to the “lowest responsible bidder” through an Invitation For Bid procurement process. Requirements of the Invitation for Bid procurement process are as follows:

RCW 47.28.050	WSF shall publish a call for bids.
RCW 47.60.680	No bid or proposal for such a contract may be received from any contractor who has not first been prequalified to perform the work by the Department of Transportation.
RCW 47.28.090	Bids shall be publicly open and read.

All bids shall be sealed and shall be accompanied by a bid deposit in an amount equal to five percent of the amount of the bid.

FTA Circular 4220.1D §9 states that the following conditions should be present for sealed bidding to be feasible:

- A complete, adequate, and realistic specification or purchase description is available;
- Two or more responsible bidders are willing and able to compete effectively for the business;

⁵ Vessel classes are now named Class 1, 2, 3, 4, 5 and terminals are a component of Highway Classes 1 through 58. However, all contracts/projects reviewed for the purposes of this audit refer to previous classifications.

- The procurement leads itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price; and
- No discussion with bidders is needed.

For Federally Funded Projects using the Invitation For Bid procurement method, the following FTA Circular 4220.1D §9.c (2) requirements apply:

- The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time to prepare bids prior to the date set for opening the bids;
- The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services sought in order for the bidder to properly respond;
- All bids will be publicly opened at the time and place prescribed in the invitation for bids;
- A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. When specified in bidding documents, factors such as discounts, transportation costs, and life cycle costs shall be considered in determining which bid is lowest;

Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

- Any or all bids may be rejected if there is a sound documented business reason.

Procurement by Request For Proposal (RFP)

The competitive Request For Proposal procurement method is often used where conditions for an Invitation for Bid, such as complete, adequate, and realistic specification, are not present. Competitive RFP procurement process allows evaluation of technical and performance factors in addition to price. RCW 47.56.030 gives WSF authority to enter into procurement contracts under a competitive RFP process. Specifically, it allows the Secretary of the Department of Transportation to determine, in writing, that the use of an Invitation for Bids procurement process is not practicable or

not advantageous to the state. A contract then can be awarded by the use of a formal request for proposals solicitation process.

RCW 47.56.030 provides that an award shall go to the responsive and responsible proposer who offers the most advantageous proposal. Factors to be considered include:

- Price, maintainability, reliability, commonality, performance levels, life-cycle cost, cost of transportation or delivery, delivery schedule offered, installation cost, cost of spare parts, availability of parts and services offered and:
 - Ability, capacity, and skill of proposer
 - Character, integrity, reputation, judgment, experience, and efficiency of proposer
 - Ability to perform contract within specified time
 - Quality of performance of previous contracts or services
 - Previous and existing compliance with laws
 - Objective, measurable criteria defined in RFP

For federally funded projects using the Request For Proposal procurement method, the following FTA Circular 4220.1D §9.d requirements apply:

- Requests for proposals will be publicized. All evaluation factors will be identified along with their relative importance.⁶
- Proposals will be solicited from an adequate number of qualified sources.⁷
- Grantees will have a method in place for conducting technical evaluations of the proposals received and for selecting awardees.⁸
- Awards will be made to the responsible firm whose proposal is most advantageous to the grantee's program with price and other factors considered.⁹

THE CONTRACTING PROCESS

WSF Procurement Process

⁶ FTA Circular 4220.1D § 9.d (1).

⁷ FTA Circular 4220.1D § 9.d (2).

⁸ FTA Circular 4220.1D § 9.d (3).

⁹ FTA Circular 4220.1D § 9.d (4).

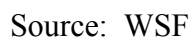
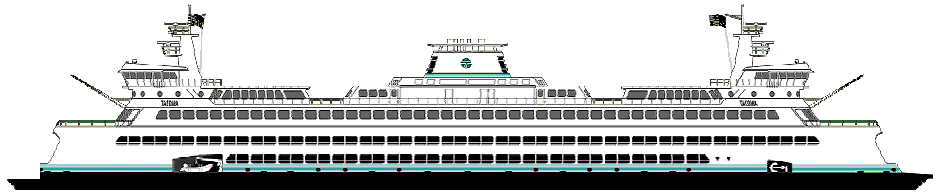


Illustration 6

PROJECT REVIEW

JUMBO MARK II

IFB - New Construction



The Jumbo Mark II contract was an Invitation For Bid (IFB) contract requiring a Class 81 (Vessel Construction and Renovation) contractor status of any primary contractor bidding on the project. The provisions for the contract were to construct a maximum of three (3) Jumbo Mark II Class ferries within the state of Washington pursuant to project legislation. Each ferry was to have the following specifications:

- 460 x 90 feet,
- Carry 2,500 passengers, and
- 218 vehicles.

Similar to WSF's Jumbo Class ferries, the Jumbo Mark II's were planned with improvements made to the design, equipment, and technology. WSF had developed the vessel plans and specifications, and was to furnish the complete diesel-electric propulsion system to the contractor.

The contract delivery date for the first ferry was to be within 25 months after the contract execution date. The second and third ferries were to be constructed at WSF's sole option, to be exercised within 12 months after contract execution. If WSF elected to have the second and third ferries built, the second ferry was to be delivered to WSF within 37 months after contract execution, and the third delivered within 49 months after contract execution.

In addition to being a Class 81 contractor (Vessel Construction and Renovation), a special pre-qualification requirement was to be met before a contractor's bid would be

accepted. This special requirement consisted of developing a build strategy, answering a questionnaire, and an on-site survey.

The IFB process was extraordinary. The timeline from public notice to award notice was seven months. There were five pre-bid conferences, over 500 bidder questions, and 50 IFB addenda. The bid due date was changed three times. The final revised due date was four months after the original due date. Delays were attributed to revisions to the women - and minority-owned business requirements, questions regarding the state's ship worker wage requirements, and questions regarding the bond requirements.

There were five change orders relating to this contract. One change order was to add an Oily Water Separator (OWS) to the vessel. The OWS that ultimately was chosen had not been selected until after the contract had been awarded. One change order was WSF exercising its option to have the second and third vessel built, one was for an early delivery bonus, and the final two were regarding the settlement of the final contract price.

Financial Overview

The engineer's estimate for the construction of the three Jumbo Mark II vessels was \$191,204,972. The lowest bid was \$181,568,153, which was 5.04% under the engineer's estimate. There was only one other contractor who submitted a bid¹⁰, which was for \$239,777,000, 25.40% higher than the engineer's estimate. Todd Shipyard was awarded the contract for being the responsive and responsible bidder who offered WSF the lowest Total Bid Price for Award. No protests were filed during the appeal period.

The final contract price for the construction of three Jumbo Mark II ferries was \$205,490,167, or 13% higher than Todd's original bid of \$181,568,153. This 13% increase can be attributed to Indefinite Quantity Work that was resolved after the vessels

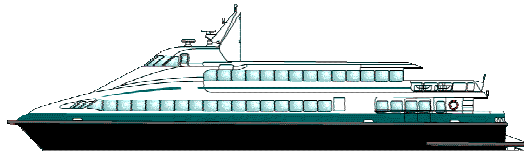
were constructed. While construction of the first vessel was underway, WSF approved close to 300 Indefinite Quantity Work items. Instead of spending time settling the costs associated with these IQW's, Todd and WSF agreed to focus on the completion of the first vessel, working out unresolved IQW's after the vessel was finished.

Contract Review

The Jumbo Mark II Ferries contract was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and practices, and the experience of the Capital Program Performance Audit team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest bidder, and administered the contract in accordance with relevant statutes, codes, procedures, and practices.

PASSENGER ONLY FERRIES

RFP - New Construction



The Passenger Only Ferries (POF) Procurement Contract provided for the design and build of one passenger only ferry vessel with the sole option to purchase one additional vessel. Pre-qualification requirements were for Class 81 (Vessel Construction and Renovation.) Minimum criteria included:

- Proven technology
- Minimum cruising speed of 30 knots at full load displacement
- Interior seating for a minimum of 350 passengers
- A wake wash below stated minimum

¹⁰ Evergreen State Shipbuilders, a joint venture between several other local shipyards.

- Contractor to provide:
 - drawings,
 - manuals,
 - training,
 - engineering support,
 - special tools and
 - optional spare parts

Pursuant to RCW 47.56.030, WSF requested the Secretary of Transportation approval for the use of an alternate Request For Proposal procurement process. The request and accompanying report (“Determination of Procurement Process for New Passenger Only Ferries”), discussed the two procurement methods available to WSF and their application to the Passenger Only Ferries procurement contract. WSF justified the need for the RFP process based on the following factors:

- WSF does not have the technological expertise to develop a detailed design drawing and specifications as required in the IFB procurement process.
- The RFP process would allow the state to take advantage of the most current and proven experience from industry.

The Secretary of Transportation agreed the Invitation For Bids procurement process was not practicable for the acquisition of the Passenger Only Ferries and authorized WSF to utilize the formal RFP solicitation process pursuant to RCW 47.56.030.

The following evaluation factors were specified in the RFP and applied in the award process:

- | | |
|------------------------|-----|
| ▪ Initial Price | 15% |
| ▪ Life Cycle Cost | 15% |
| ▪ Reliability | 15% |
| ▪ Maintainability | 10% |
| ▪ Performance Levels | 38% |
| ▪ Builder’s Experience | 7% |

The procurement of the Passenger Only Ferries was partially funded by the Federal Transit Administration.

Proposals

Initial proposals were received by five pre-qualified primaries. WSF evaluated the initial proposals in accordance with the evaluation factors specified in the RFP, determined all were within the competitive range, and issued written critiques. One of the initial proposers declined to submit a final proposal citing pre-qualification issues, surety concerns, and inability to complete certain forms provided by WSF. In reviewing the four final proposals, WSF determined that all proposals had one or more deficiencies. A letter was issued advising each proposer of its respective proposal deficiency or deficiencies. Deficiencies included:

- Proposal prices exceeded WSF's project budget
- Incomplete and modified provisions in the RFP financial proposal form
- Conditional acceptance of the RFP Contract Terms
- Failure to satisfy all minimum requirements
- Exceptions to RFP technical Specifications that exceeded those previously authorized by WSF

Washington State Ferries determined it was in the taxpayers' best interest to request "second" final proposals of the remaining four proposers in response to "first" final proposal deficiencies. Following the receipt of the second final proposals, an evaluation panel conducted a final proposal evaluation to determine the most advantageous proposal in accordance with the RFP minimum requirements and specified evaluation factors.

Financial Overview

The Passenger Only Ferries Procurement Contract was awarded to Dakota Creek Industries Inc., for \$9,167,576 (1st Vessel.) The final engineering estimate was \$7,160,996, a difference of 28%. The proposal amount and engineering estimate for both vessels were \$19,381,823 and \$15,775,000 respectively, a difference of 22.86%.

Justification for the variance in proposals to original project estimate:

- Benchmark costs for the engineering solutions (low-wake, low-noise) were not available at the time of the pre-award cost estimate.

The unique engineering solutions required by WSF were a result of the nature of the proposed service routes and public concerns about the environmental impacts of ferry wakes and noises.

The final project cost was \$19,676,184, 1.3% greater than the original contract amount for both vessels of \$19,381,823. The difference was a result of decreases in contract price of \$60,000 in liquidated damages for late delivery of the 1st vessel, \$35,844 reduction in IQW work, and increases of \$93,270, \$148,390, and \$148,545 for spare parts, control system data loggers, and testing respectively.

Protests and Litigation

Protests to the selection process were filed with WSF by two unsuccessful proposers. Upon denial of those protests, a petition was filed with the Thurston County Superior Court. Issues raised in the protests and the Superior Court petition included, but were not limited to:

- Authority to procure Passenger Only Ferries under RCW 47.56.030;
- The adherence by Washington State Ferries to Washington State Ferries established guidelines;
- The scoring methodology used in the evaluation of proposals;
- The employment of Art Anderson & Associates as advisors, arguing a conflict of interest; and
- The contract award to Dakota Creek Industries.

The Thurston County Superior Court rejected the protestant's motion for a declaration invalidating WSF's procurement process and the award of the POF contract. The Washington Supreme Court declined to review the Superior Court's decision resulting in the matter being dismissed for "want of prosecution" on August 4, 1999.

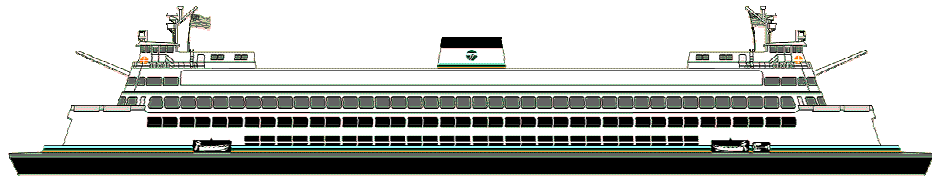
Contract Review

The Passenger Only Ferries Procurement Contract No. 00-4773 was examined and evaluated in the context of the requirements of the Federal Transit Authority, Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and

practices, and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly publicized, identified all evaluation factors along with their relative importance, solicited from an adequate number of qualified sources, awarded to a responsible contractor possessing the ability to perform successfully under the terms and conditions of a proposed agreement with price and other factors considered.

M.V. YAKIMA

IFB - Preservation



The M.V. Yakima Preservation Contract was an Invitation For Bid (IFB) contract requiring a Class 81 (Vessel Construction and Renovation) contractor status of any primary contractor bidding on the project. The provisions for the contract were for dockside repairs to the ferry M.V. Yakima, including:

- Asbestos abatement;
- Removal and re-installation of main motor, propulsion generator and main diesel engines;
- Steel renewal;
- Pilot house and crew cabin modifications; and
- Other miscellaneous work.

Both the procurement and the contract administration process had significant changes from other like contracts in the past. As the result of previous audit recommendations, a number of changes were made:

- A Contracts Compliance Officer was assigned to oversee the Contract Reports process, identify potential liability issues, and to perform risk analyses related to contracts issues.
- Contract language required contractor to submit a price/time proposal for ordered IQW work within 15 days following receipt of the “proceed with the work” order.

- IQW work for the M.V. Yakima Preservation contract was limited to less than 10% (actually 2.16%) of the total base work package.
- Per the contract provisions, the contractor was paid for time spent preparing proposals for change orders, which could have ultimately changed not only the price of the project, but also the contract redelivery date. To decrease the amount of time spent preparing proposals, a “Quick Chit” system was developed, which gave the contractor the ability to skip the proposal process for work that would be less than \$2,500 in price; however, the Project Engineer still had to authorize any changes made regarding work being conducted on the vessel. It appeared that this was an effective timesaving tool for authorizing work under \$2,500.

Financial Overview

The low bid for the Yakima Preservation Contract was \$28,988,324. The final engineering estimate was \$26,966,151, a difference of 7.5%. There was only one other contractor who submitted a bid (Lake Union Drydock Co.), which was 20.73% higher than the engineer’s estimate. Todd Shipyard was awarded the contract for the responsive and responsible bidder who offered WSF the lowest Total Bid Price for Award. No protests were filed during the appeal period.

To date, the final contract price has not been determined. The project cost as of December 11, 2000 was \$27,735,291, 98% of the original contract amount. The \$627,032 decrease in project cost represents a decrease in steel lot work of \$944,932 due to the amount of steel replacement authorized being less than planned, and an increase of \$317,900 in approved change orders. In our analysis, change orders are classified in two categories:

- Value Added: Changes that were unforeseeable and unanticipated during the design phase of the contract.
- Design/Specification Issues: Change orders that resulted from errors or omissions in the final specifications/drawings.

To date (excluding the steel lot work change order), 76% of change orders may be classified as value added and 24% may be classified as design/specification issues.

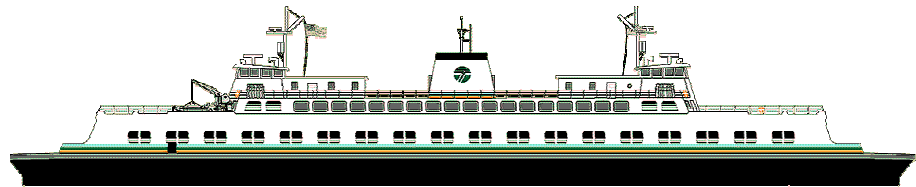
The redelivery date of the signed contract is no later than January 24, 2001. As an incentive to complete the job early, a delivery bonus of \$15,000 per day, not to exceed thirty days was outlined in the contract. Due to change order work performed outside the scope of the contract, Todd believed the redelivery date should be extended so they would qualify for the full early delivery bonus. Even with the additional changes outlined in the change order work, Todd is expecting to complete the preservation project early. Change Order #54 remedies the delay consequences of the ordered work by accelerating the testing activities planned for the period preceding Dock Trials and provides for the testing activities to proceed on an overtime basis from November 15, 2000 to December 9, 2000.

Contract Review

The M.V. Yakima Preservation Contract was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and practices, and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest bidder, and administered the contract in accordance with relevant statutes, codes, procedures, and practices.

EVERGREEN STATE CLASS AND ELWHA PROPULSION CONTROL REPLACEMENT

RFP - Preservation



The Evergreen State Class Vessels and M.V. Elwha Propulsion Control System Contract required a Class 84 (Vessel Electrical Repairs) contractor status of any primary contractor bidding on the project. The provisions for the contract included:

- Replacement Propulsion Control Systems (PCS) for the three Evergreen State Class Vessels (M.V. Evergreen State, M.V. Tillikum, M.V. Klahowya), and one Super Class Vessel, the M.V. Elwha.
- The PCS upgrade was to include all system design, manufacturing and fabrication, commissioning, testing and regulatory agency certifications for the new PCS.
- The contract for the installation work required that the work be accomplished one vessel at a time to minimize disruption of ferry schedules.

The Evergreen State Class Vessels and M.V. Elwha Propulsion Control System Contract used the Request For Proposal (RFP) procurement process. The following evaluation factors were applied in the award process:

- | | |
|---|-------|
| ▪ Initial Price | 12.5% |
| ▪ Operational Cost | 12.5% |
| ▪ Reliability | 25.0% |
| ▪ Maintainability | 10.0% |
| ▪ Performance Levels | 30.0% |
| ▪ Management, Organization,
Facilities, and Schedule | 10.0% |

The Evergreen State Class Vessels and M.V. Elwha Propulsion Control System Contract was awarded to General Electric Company, which was the only company to submit an initial and final proposal for this project.

Financial Overview

The engineering estimate, as stated on the “Contract Checklist Inquiry” from a computer printout for this contract, was \$12,531,575. The WSF Engineer’s Estimate for the RFP was prepared by the Chief Estimator and totaled \$14,046,950. To assist potential proposers, a proposed range for the contract - \$9,000,000 to \$15,000,000 - was published in the RFP advertisement.

General Electric’s initial proposal price was \$13,143,622, 6.43% below the WSF estimate. After initial negotiations between WSF and General Electric, the final proposal price totaled \$12,721,219:

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M.V. Evergreen State:	\$ 4,189,515
M.V. Tillikum	\$ 2,925,299
M.V. Klahowya	\$ 1,774,630
M.V. Elwha	<u>\$ 3,831,775</u>
Total Contract Price	<u>\$12,721,219</u>

G.E.'s bid of \$12,721,219 was 1.5% higher than the engineer's estimate. Due to Initiative 695, the scope of work changed from the entire Evergreen State Class vessels to excluding the Evergreen State. The Evergreen State was taken out of service and work on that vessel was suspended. The decrease to the contract was for \$1,988,264, because some work had already been performed on the Evergreen State. At the time of our review, the revised amount of the contract was \$10,732,955.

Only two change orders to date were included in the contract file. The first was to exclude additional work to the Evergreen State, and the second was for changes in the schedule.

Contract Review

The Evergreen State Class Vessels and M.V. Elwha Propulsion Control System Contract was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and practices, and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest bidder, and administered the contract in accordance with relevant statutes, codes, procedures, and practices.

EDMONDS FERRY TERMINAL OVERHEAD LOADING AND TERMINAL BUILDING

The Edmonds Ferry Terminal Overhead Loading and Terminal Building Contract provided for a major renovation of this facility located in Snohomish County, Washington. Major work elements and improvements included:

- Removal of the existing terminal building;
- Removal of the existing dolphin;
- Expansion of existing trestle dock;
- Modifications to the site's electrical system;
- Installation of a new stand-by generator;
- Construction of a new fixed dolphin;
- Construction of a new terminal agent's office;
- Construction of a new terminal building;
- Construction of a new pedestrian loading system, including:
 - Walkway,
 - Transfer Span,
 - Hydraulic Loading Cab, and
 - Apron Assemblies; and
 - Other Work.

Financial Overview

The low bid for the Edmonds Ferry Terminal Project was \$9,581,904.20. The final engineering estimate was \$8,075,673.26, a difference of about 18%. Because the low bid exceeded the engineering cost by over 10%, a justification and recommendation was requested from CH2M Hill who had prepared the engineering estimate on behalf of the Washington State Ferry system.

The CH2M Hill review identified four key reasons the lowest bid price was justified and that the contract should be awarded. These key reasons were:

1. Current Bidding Climate,
2. Unique Project Characteristics,

3. Contractor Experience, and
4. Risk and Contingency.

Based on the CH2M Hill findings and recommendation, Washington State Ferries performed an analysis of possible construction items that could be deleted from the project scope to reduce project costs. The analysis found that to eliminate project elements sufficient to cover the variance between the engineer's estimate and the lowest bid would compromise the operational efficiency of the terminal. The low bid was determined to be reasonable and that an award should be made to the low bidder. Funding to cover the variance was drawn from another terminal project that was aged into a future biennium.

The revised plan amount (bid plus change order adjustments) was \$9,913,260. The total currently paid to date is \$9,919,345 and an additional \$8,000 is estimated to complete the project. This estimated final amount, \$9,927,345 is \$345,441, or approximately 3% greater than the original contract amount, and well within contingency parameters.

Contract Review

The Edmonds Ferry Terminal contract was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures, WSF Contracting Practices and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest cost bidder and administered the contract in accordance with relevant statutes, codes, procedures, and practices.

CLINTON FERRY TERMINAL DOCK EXPANSION – PHASE I

The Clinton Ferry Terminal Dock Expansion – Phase I contract was an Invitation For Bid (IFB) contract requiring a Class 90 (Terminal Structures – Miscellaneous, Including Pile Driving) contractor status of any primary contractor bidding on the project. The provisions for the contract were for improvements at the Clinton Ferry Terminal for the following:

- Replacement of the southern portion of the existing timber structure with a concrete and steel dock;
- Removal and refurbishment of existing transfer span and apron;
- Construction of new tower foundations, towers and headframe, a new steel pile wingwall, and six steel pile dolphins;
- Replacement of a portion of the existing timber bulkhead with a new concrete and steel bulkhead;
- Widening of SR525 in the area of the toll plaza, including the construction of a new retaining wall;
- Placement of a prefabricated building for an agent's office and storage building/tractor garage;
- Construction of a new terminal building;
- New water supply and septic system;
- Supplying and connecting an emergency power generator; and
- Other work.

Financial Overview

The engineering estimate for this project for all components was \$13,747,719. Bids were received from five contractors, ranging from one to thirteen percent lower than the engineer's estimate. The low bid for the Clinton Ferry Terminal Dock Expansion – Phase I contract was \$12,011,307, 13% below the engineering estimate for this project. A verification of the bid price was requested because the difference in bid price was less than 10% of the engineer's estimate. An unsuccessful bidder filed a pre-award protest stating that MKB Constructor's bid should be considered unresponsive due to the failure of its Disadvantaged Business Enterprise utilization certificate to meet requirements outlined in the IFB documents. WSF rejected the protest stating that MKB Constructor's bid was valid and did meet all established requirements. MKB Constructors was awarded the contract as the responsive and responsible bidder who offered WSF the lowest Total Bid Price for Award.

To date, the final contract price has not been determined. Elements of the contract have not been completed. At the time of our review, there were 26 change orders, bringing the amount of the contract to \$12,792,163, which is 6.5% higher than the original contract price. The increase in project cost represents \$780,856 in approved changes orders. In our analysis, change orders are classified in two categories:

- Value Added: Changes that were unforeseeable and unanticipated during the design phase of the contract.
- Design/Specification Issues: Change orders that resulted from errors or omissions in the final specifications/drawings.

To date, 86% of the cost of change orders may be classified as value added and 14% may be classified as design/specification issues.

Contract Review

The Clinton Ferry Terminal Dock Expansion – Phase 1 Contract was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and practices, and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest bidder, and administered the contract in accordance with relevant statutes, codes, procedures, and practices.

COLMAN DOCK SLIP 1 OVERHEAD LOADING CONSTRUCTION

The Colman Slip No. 1 Overhead Loading Repairs Invitation for Bid Contract No. 5543 provided for the improvement of the passenger overhead loading system for Slip No. 1. Bidders were required to be prequalified for Class 90 – Terminal Structures. Improvements included:

- Removal and replacement of the transfer span lifting cylinders;

- Removal and replacement of the cab leveling cylinders;
- Removal and installation of a new hydraulic and control system;
- Construction and installation of a new apron;
- Removal and installation of a new head frame;
- Raising the lift towers approximately ten feet;
- Construction of a new span lifting frame;
- Reinforcement of the truss and cab;
- Other work.

Financial Overview

Two of four interested and prequalified Class 90 primary contractors submitted bids on the project. The final engineering estimate for the Colman Slip No. 1 Overhead Loading Repairs contract was \$2,511,427. The contract was awarded to Manson Construction Co. as the responsive and responsible bidder, with a low bid of \$2,751,250, at 9.55% above the engineer's estimate. The unsuccessful bidder exceeded the engineer's estimate by 46.52%.

The revised project cost is \$3,135,542, 13.97% greater than the original contract amount. To date, \$2,634,559 has been paid. The increase in project cost represents \$384,292 in approved change orders. In our analysis, change orders are classified in two categories:

- Value Added: Changes that were unforeseeable and unanticipated during the design phase of the contract.
- Design/Specification Issues: Change orders that resulted from errors or omissions in the final specifications/drawings.

To date, 52% of change orders may be classified as value added and 48% may be classified as design/specification issues.

Extension of Contract

To date, the project has not been completed. The contract specified in Addendum 2 that the project was to be completed within 240 working days of contract execution. Change Order #19 extends the project completion date by 20 working days to March 23, 2000. The contractor has been working under liquidated damages since March 23, excluding a suspension period between April 7, 2000 to May 8, 2000, at \$1,700 per day, using the

Standard Specification Liquidated Damages Formula. There are no caps on liquidated damages for this contract. Anticipated project completion is May or June 2001.

Contract Review

The Seattle Slip No. 1 Overhead Loading Repairs Invitation For Bid Contract No. 5543 was examined and evaluated in the context of the requirements of the Revised Code of Washington, Washington Administrative Code, WSF contracting procedures and practices, and the experience of the Capital Program Performance Audit Team. Based on this examination, the Washington State Ferry System developed project requirements, properly advertised and competitively bid, selected the lowest cost bidder and administered the project in accordance with relevant statutes, codes, procedures, and practices.

RECOMMENDATIONS

Records Management

The integrity of the records maintained by the Contract Services staff at WSF is very important. These documents are a matter of public record and should be preserved so that when interested stakeholders, internally as well as externally, wish to view the information, the records are maintained as completely and accurately as possible.

Our review of specific contract files found files with incomplete, missing, or misfiled information. For example:

- Information relating to one project was found in contract files relating to other projects,
- Information could not be found under the established tabs included in the main contract file folders, and
- Copies of change orders and work authorization reports contained in the file were incomplete.

A checklist was developed to track the progress of an individual contract. However this checklist is not consistently used nor always completed accurately. The checklist is

intended to be placed in the front of each contract file and completed (dated) as steps of the contract process have been finished. In many cases, the checklist was not complete.

Although Contract Services staff has an informal process for filing information, much of it does not get into the files in a timely manner. Additionally, each contract coordinator appeared to have individual methods for organizing contract information.

Contract Services should assure all applicable contract information is collected, organized, and filed in a timely manner. The current checklist should be fully used or modified as appropriate and individual contract coordinators should be responsible for maintaining files.

RECOMMENDATION #2

We recommend Washington State Ferries:

- Implement the use (or modify as appropriate) of its current checklist.
- Assure contract coordinators maintain contract files.

Contracting Procedures

Currently, WSF maintains written contracting procedures pertaining to the IFB process. A *Desk Procedures* manual focuses on pre-bid, opening bid, bid review, post-bid, and emergency contracting practices. Although this manual provides general guidelines and direction to its users, it does not include all components of contracting. For instance, it provides no procedures regarding the RFP process.

Washington Administrative Code, Revised Code of Washington, Federal Code of Regulations, and various DOT manuals are used as a guide for procurement practices. However, no complete list of applicable regulations and codes are available.

WSF should modify its current contracting procedures manual to include:

- The contracting process from budget to contract distribution;
- Specific procedures and requirements concerning the RFP process;
- A list of applicable laws, regulations, and codes; and
- A list of DOT manuals used for reference.

In addition, WSF management should assure all respective users are aware of the manual and it is readily made available – either in hardcopy format or on-line.

RECOMMENDATION #3

We recommend Washington State Ferries modify its current contracting procedures manual and update it as appropriate.

ALTERNATIVE MODELS

Although WSF has been given limited use of RFP's, it essentially procures new vessels and preservation/construction projects for vessels and terminals through the use of the Invitation For Bid (IFB) process. Over the years, this process has provided a mechanism that ultimately has resulted in high quality work. However, it has come with increased costs, delays, and claims. Relationships with contractors have suffered and controversies have been created. Mistrust has developed between WSF and area contractors.

Procurement through the IFB process is effective for many public agencies. Statutes that are intended to insure that quality projects, goods, and services are purchased at the least cost govern the State of Washington and its many cities and counties. The goal to assure that favoritism and fraud are prevented is met through this competitive bid method.

Selecting contractors for many public works projects (road maintenance overlay highway construction, bridge repair, terminal preservation, etc.) can effectively be accomplished through the IFB process. However, using an IFB is often counterproductive for the building of a new vessel. Limited contractors, very specific design requirements, unique equipment, regulatory requirements, and life expectancies require a different level of involvement from both owner and builder.

Other public entities have also recognized the uniqueness of building and preserving ships as compared to other projects. Although IFB's currently continue to be used by others for new vessel construction, additional methods are also being employed. The following is a brief description of procurement methods currently being used by other public and private entities:

Fixed Price - Invitation For Bid (IFB)

User	Services and Products
Alaska Marine Highway System	Overhauls and Renovations (Federal Dollars)
International Cruise Industry	Maintenance and Repair Only
Nantucket Steam Ship Authority	Vessel Maintenance Only
North Carolina Ferry System	Standard Equipment & Systems New Vessel Construction
Staten Island Ferry	New Vessel Structure & Maintenance
US Coast Guard	Maintenance & Repair (using less) New Small Simple Vessels
Washington State Ferries	Most New Construction Maintenance/Rehabilitation and Preservation

Advantages	Disadvantages
May Minimize Initial Cost	Inappropriate Products/Equipment
Some Bidders Pre-Qualified	Ignores Best Value Concept
Appears to be Best Initial Cost	Ignores Reliability
Likely Minimizes Maintenance	Ignores Standardization

Ignores Maintainability
 Ignores "Identifiable Costs"
 Ignores Life Cycle Cost
 Lacks Joint Project Ownership
 Litigious
 Needs Expensive, Detailed Specifications
 Contractor may Minimize Effort
 Bids are Rarely Competitive for Vessels
 More Time Consuming
 No Pricing Standards for Vessels

Fixed Price - Request For Proposal (RFP)

User	Services and Products
Alaska Marine Highway System	New Vessels (Design/Construction)
British Columbia Ferry System	New Vessel Construction & Systems Vessel Maintenance and Repair
International Cruise Industry	New Vessels (Design/Construction)
Nantucket Steam Ship Authority	New Vessels (Design/Construction)
Staten Island Ferry	New Vessel Design
US Coast Guard	Maintenance & Repair New Large Complex Vessels
US Navy	Maintenance and Repair New Service Craft and Repair Ships #4 and More in New Classes
Victoria Clipper	New Vessels (Design/Construction)
Washington State Ferries	Major Vessel Equipment and Systems

Advantages	Disadvantages
Ensures Meeting Special Needs Considers Best Value Considers Standardization Considers Reliability Considers Life Cycle Cost Considers Maintainability Promotes Project Ownership Avoids Much Litigation Less Expensive for Owner	Cost May Be Greater Than Lowest Bid For Initial Acquisition

Less Time Consuming
Can Consider "Identifiable Costs"
Cost Over Runs are Mitigated

Fixed Price - Sole Source

User	Services and Products
Alaska Marine Highway System	Repair and Maintenance (State Dollars)
International Cruise Industry	Maintenance and Repair
Staten Island Ferry	Major Vessel Equipment and Systems
US Coast Guard	Maintenance and Repair
US Navy	Multi-Year Maintenance Contracts
Victoria Clipper	Maintenance and Repair
Washington State Ferries	Does Not Use

Advantages	Disadvantages
Already Familiar with Vessel	Appearance of Favoritism
Standardization of Equipment	Limited Price Competition
Secure Special Expertise	Often Only One Competitor
Secure Knowledge about Project	
Minimizes Owner Risk	
Secure Known Service Quality	
Secure Proven Performance	
Joint Project Ownership	
Considers "Identifiable Costs"	
Best Value for Owner	
Considers Reliability	
Considers Life Cycle Cost	
Considers Maintainability	
Promotes Project Ownership	
Avoids Much Litigation	
Less Expensive for Owner	

Cost Based – Request For Proposal

User	Services and Products
US Coast Guard (Cost Plus Fixed Fee) (Cost Plus Award) (Cost Plus Incentive)	New Classes of Ships
US Navy (Cost Plus Fixed Fee) (Cost Plus Award) (Cost Plus Incentive)	New Classes of Ships
Washington State Ferries	Does Not Use

Advantages	Disadvantages
Ensures Meeting Special Needs Considers Best Value Considers Standardization Considers Reliability Considers Life Cycle Cost Considers Maintainability Promotes Project Ownership Avoids Most Litigation Less Expensive for Owner Less Time Consuming for Owner Can Consider "Identifiable Costs" Motivation to Contain Costs	Expensive to Monitor and Cost

Cost Based – Sole Source

User	Services and Products
US Coast Guard (Cost Plus Fixed Fee) (Cost Plus Award) (Cost Plus Incentive)	Maintenance and Repair
US Navy (Cost Plus Fixed Fee) (Cost Plus Award) (Cost Plus Incentive)	Maintenance and Repair
International Cruise Industry	Maintenance and Repair
Washington State Ferries	Does Not Use

Advantages	Disadvantages
Promotes Project Ownership Secure Special Expertise Secure Knowledge About Project Less Time Consuming for Owner Secure Known Service Quality Secure Proven Performance Considers Best Value Considers Standardization Considers Life Cycle Cost Less Expensive for Owner Few Disputes / Little Litigation Motivation to Contain Costs Considers "Identifiable Costs" Minimizes Owner Risk	Expensive to Monitor and Cost Possible Appearance of Favoritism Limited/No Price Competition

The US Navy, US Coast Guard, and other public entities are similar to WSF with respect to the rules and regulations they must follow. However, these organizations have been given a greater degree of flexibility in determining the most effective method to contract.

The IFB process is considered very restrictive and hinders both the contractor and the owner in designing and building vessels. As a result, most owners of ships and ferries are currently using some form of the Request for Proposal process-fixed cost or cost based – for new construction.

For example, the Navy’s use of RFP’s allows it to base its proposal evaluation on “best value.” This method allows specific evaluation criteria to be established and a contractor selected based on approach as well as cost. Navy contracts are also designed to share risk with contractors. Escalation clauses are included in contracts to protect the contractor from inflation associated with long-term construction projects.

Most entities are procuring new marine vessels through alternative strategies for two primary reasons:

1. The often, unstated assumptions regarding competition and product standardization that underlay the IFB process may not be valid, and
2. The requirement to select the lowest bid in the IFB process is often in conflict with the selection criteria that are relevant to best serve and protect the public’s or owner’s interests - particularly for a large marine vessel.

To assure the needs and interests of the public are addressed in the most effective manner, the procurement mechanism must recognize that significant differences exist in market characteristics and relevant selection criteria associated with different capital asset and service categories. Capital asset and service procurement needs can be categorized by significant differences in market characteristics and relevant selection criteria.

- Ashore Facilities and Infrastructure,
- Passenger Only Ferry Construction,
- Ferry Maintenance and Repair,
- Auto Ferry Equipment and Systems, and
- Auto Ferry New Construction.

Each of these capital asset and service categories is discussed below, including recommendations regarding the most appropriate procurement mechanism for each category.

Ashore Facilities And Infrastructure

Ashore facilities and infrastructure are presently procured through the Invitation For Bid (IFB) process. As discussed previously, the IFB process is based on contracting with the “lowest responsible bidder.” The process follows specific, prescribed practices that appear to be adequate in the procurement of ashore facilities and infrastructure for the following reasons:

- Facility and infrastructure construction involves designs, techniques, materials, processes and systems that tend to have a high degree of standardization.
- Industry standards are generally well established regarding material characteristics, maintenance requirements, expected life, and other relevant parameters.
- Cost information is widely available and commonly understood regarding nearly all aspects of facility and infrastructure construction activity.
- Many organizations are generally available that can accomplish, and will compete, for the required work. Larger projects can attract additional competitors from more distant markets.
- Specification can be developed by, or on behalf of, the public that effectively communicates needs, expectations, and relevant standards and conditions.

Procurement through the IFB approach makes good use of the relative strengths of the owner and the contractor. Specifically, Washington State Ferries has the experience and capability, either internally or supplemented by specialized design and engineering consulting services, to prepare and effectively communicate to potential contractors detailed specifications that incorporate specific needs and priorities. Contractors can compete on how to best accomplish, and at what cost, the required work with a common

understanding regarding expected results and the relevant standards and conditions that apply.

No change in procurement authority or practices appears to be warranted at this time regarding the procurement of ashore facilities and infrastructure.

Passenger Only Ferry Construction

WSF currently can procure passenger-only-ferries through the use of a Request for Proposal – Best Value with the approval of the Washington Secretary of Transportation. The RFP process allows evaluation of technical and performance factors in addition to price.

Various market and asset characteristics make this process very effective for WSF:

- Washington State Ferries lacks experience, expertise, and capacity to design and prepare appropriate passenger only ferry specifications.
- Numerous local, national, and international designers and shipyards have the experience and capacity to design and build new passenger only ferries.
- The passenger only ferry market appears to be quite competitive for a marine vessel market.
- The request for proposal approach allows the state to competitively evaluate designs based on the needs and preferences of stakeholders.
- The request for proposal approach allows WSF to evaluate alternatives based on vital life cycle and total cost criteria such as: operating costs, life cycle costs, reliability, fleet standardization, staff maintenance training requirements, supply support, reliability, and similar cost and service items.
- The request for proposal approach allows WSF to evaluate alternatives based on the reputation, past performance, judgment, integrity, and similar factors of the proposing firm(s).
- The request for proposal approach is less expensive to WSF in terms of elapsed time period, staff time, and likely need for consulting expertise.

No change in procurement authority or practices appears to be warranted at this time.

Ferry Maintenance and Repair

Vessel maintenance and repair services are presently procured by WSF through the IFB process. This process is generally appropriate for maintenance and repair services other than those on the largest ferries that can only be accomplished in dry dock. The above exception aside, the IFB process is appropriate because of the following conditions.

- WSF has experience and adequate staff to develop shipyard maintenance and repair specifications.
- WSF has experience and adequate staff to provide effective project management services during maintenance and repair evolutions.
- There are a number of local competitors that can accomplish dockside work, and out of water services on smaller ferries.

The use of IFB's for procurement of dockside and small ferry maintenance and repair services is appropriate. No change in procurement authority or practices appears to be warranted at this time.

In regard to dry dock and related services for large ferries, it is important to note that only one local-area shipyard currently has the capacity to handle these ferries. Presently, WSF must utilize the IFB process to secure dry dock and related services for its large ferries, knowing that only one shipyard can handle its needs. This lack of competition puts WSF into a difficult situation and doesn't necessarily result in the lowest cost for services.

The US Navy is also faced with this situation for its Everett home ported ships. The Navy response was to enter into multi-year service agreements. Both the request for proposal and sole-source procurement approaches were used to secure these agreements. The Navy believes that these multi-year agreements, customized by ship type, have been beneficial to both parties and have reduced costs. The use of this method has allowed the Navy to ascertain proven performance, assure standardization, limit disputes and litigation, minimize its risks, and effectively maintain costs.

To further enhance the current level of procurement of vessel maintenance and repair services, WSF should examine alternative procurement approaches and statutory

language. Models, similar to those currently in use by the US Navy, should be pursued to determine applicability to WSF operations.

RECOMMENDATION #4

We recommend Washington State Ferries examine and pursue alternative procurement approaches and statutory authorization regarding procurement of vessel maintenance and repair services.

Auto Ferry Equipment and Systems

The outfitting of vessels with appropriate equipment and systems is vital to successful vessel service and is one of the most important life cycle cost elements.

When dealing with complex products and services, particularly ones that have a long service life or impact, care must be exercised at the initial procurement stage. Things may not be what they initially appear to be. This is particularly true with vessels that have a service life of 60 years or more, and whose service value is based on concepts such as reliability and operational costs. Costs that must ultimately be born by users and/or taxpayers. Using a procurement mechanism that is based solely on acquisition cost, such as the IFB, may result in decisions that initially appear appropriate (less cost.) However the ultimate result may be an inferior level of service and reliability and increased costs for the owner and users during the asset's life.

Washington State Ferries currently has limited statutory authority for the use of RFP's in the procurement of large vessels, equipment, and systems. However, in order to use this procurement method, WSF must request permission from the Washington Secretary of Transportation. This restriction on authority to procure vital equipment and systems that

offers the “best value” and serve the best interest of both users and taxpayers can be viewed as a significant barrier to the effective procurement of public assets.

Other entities are using a procurement method that is based on concepts such as:

- Cost Effectiveness,
- Reliability,
- Quality,
- Minimum Life Cycle Cost,
- Maintainability,
- Standardization,
- Performance, and
- Best Value.

These concepts are central to the Request For Proposal – Best Value process. To preserve its long-term commitments and receive expected benefits from these investments, WSF should have the authority to procure auto ferry equipment and systems through the RFP – Best Value process.

RECOMMENDATION #5

We recommend Washington State Ferries seek legislative changes allowing the procurement of auto ferry equipment and systems through the RFP – Best Value process without first requesting an exception to the Invitation For Bid process.

Auto Ferry - New Construction

Given the size of the investment involved, and the need to ensure that a flow of benefits accrue to the citizens of Washington during the next half century or more, it is important that the procurement mechanism used for the acquisition of new auto ferries recognizes and promotes the needs and interest of stakeholders, including both users and taxpayers.

To accomplish this objective, it is important to promote the strengths of the state and potential providers of new vessels, minimize the possibilities of dispute, address unmet public needs, and avoid costs, both immediate and long-term. The IFB process, which is currently the means available for Washington State Ferries to procure new vessels, does not satisfy these objectives. The IFB process, particularly as it is applied for procurement of general products and generally applied in a roads and public works setting, is no longer used for the procurement of large vessels in most public or private entities.

The experience of WSF, other ferry operators, the US Navy, the US Coast Guard, and private vessel owners (particularly cruise owners) has resulted in the establishment of the following premises:

- Construction of a large, expensive vessel must be a partnership between the owner and the builder.
- The construction partnership must utilize and integrate the relative strengths of the parties.
- Both parties must be intimately involved in vessel design and equally share ownership of that design.

Incorporating these premises into procurement practices result in various benefits including:

- Utilization of WSF's considerable experience and expertise in the design of large ferries.
- Protection of the state's interest and need for vessel quality, reliability, and maintainability.
- Minimization of WSF staffing and other costs.
- Significant reduction of the elapsed time required to procure new ferries.
- Capture of benefits of both the IFB and RFP processes while avoiding or minimizing drawbacks.
- Assure that the efficiency and effectiveness characteristics and building strategies of the builder are captured.

A selection approach, guided by the premises and benefits above, has been successfully used by the US Coast Guard and the US Navy to identify capable builders and negotiate suitable agreements. The results are products that have satisfied owner needs, efficiently

and effectively used builder's strengths, built a common sense of ownership between the builder and owner, avoided disputes and litigation, and minimized costs. This selection approach includes a modified Request for Proposal. The principal elements of this approach include:

- Potential builders are pre-qualified based on their reputation, experience, shipyard condition and capabilities, and similar relevant criteria.
- Request For Design Proposals are solicited from qualified firms or ventures.
- Appropriate Request For Design Proposal respondents are selected to participate in a design competition. Design competitors may be reimbursed for an appropriate portion of their design competition effort.
- Design competition is based on requirements established by the owner, and is actively guided and monitored by the owner during the course of the competition. The owner's objective being that each competitor prepare an acceptable design.
- Each competitor that has prepared an acceptable design, submits a construction proposal that includes a price.
- Proposals are evaluated considering all relevant criteria, including cost, and the "Best Value" is selected.

RECOMMENDATION #6

We recommend Washington State Ferries seek legislative authority to allow the use of a modified Request For Proposal process to procure large ferry new construction.
